General Education Annual Course Assessment Form

Course Number/Title: Biology 21
GE Area: B2/B3

Results reported for AY: 2012-2013
# of sections: 2
# of instructors: 1

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Department Chair: Michael Sneary
College: Science

Instructions: Each year, the department will prepare a brief (two page maximum) report that documents the assessment of the course during the year. This report will be electronically submitted, by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by September 1 of the following academic year.

Part 1

To be completed by the course coordinator:

1. What SLO(s) were assessed for the course during the AY?

   SLO 1: Students should be able to use the methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations.

2. What were the results of the assessment of this course? What were the lessons learned from the assessment?

   During the period in review, students wrote a research-based paper on the effects on humans of environmental practices such as excess/artificial estrogen in the environment, widespread use of chemical pesticides, etc. Students were required to use a combination of primary and secondary sources in order to gather enough information to understand their topic, and then to analyze direct effects/impacts such as cellular damage, disease risk, reproductive health, etc. Of the 762 students assessed, 37% mastered SLO 1 at a high level (90% or better), 52% mastered SLO 1 at an average level (70% to 89%), and 11% failed to master SLO 1 or did so at a marginal level (69% or lower).

   This learning objective is also met through a number of lab activities in which students perform inquiry-based experiments to substantiate or refute known “facts”. For example, during the lab on Digestion (Week 2), students perform an experiment to look at the effect of an enzyme called bromelain on protein digestion. This experiment involves treating sections of Jello (a protein) with fresh pineapple (which is a source of bromelain and so will “melt” the Jello) and canned pineapple (which they discover has no effect, and are asked what occurs in the canning process that might alter the enzyme). Students are then asked to read the instructions on the box of Jello and to evaluate the “warning” that fresh or frozen pineapple, kiwi, ginger root, papaya, figs or guava should not be mixed in with the gelatin is valid or not – and why/why not. Of the 753 students assessed, 24% mastered SLO 1 at a high level (90% or better), 39% mastered SLO 1 at an average level (70% to 89%), and 37% failed to master SLO 1 or did so at a marginal level (69% or lower).
(3) What modifications to the course, or its assessment activities or schedule, are planned for the upcoming year? (If no modifications are planned, the course coordinator should indicate this.)

The assignment described above has been revised for AY 13-14. There will now be a required research methods worksheet, an outline, and multiple drafts with an anonymous peer review.

Part 2

To be completed by the department chair (with input from course coordinator as appropriate):

(4) Are all sections of the course still aligned with the area Goals, Student Learning Objectives (SLOs), Content, Support, and Assessment? If they are not, what actions are planned?

Bio 21 continues to be a single “mega-lecture” and all lab sections are coordinated by the individual teaching the lecture. Therefore, all sections are still aligned with the area Goals, SLOs, Content, Support and Assessment for Bio 21.